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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,670	06/27/2003	Markku J. Heikkila	872.0149.U1(US)	8036
29683	7590	12/29/2004	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			DAVIS, CYNTHIA L	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,670

Applicant(s)

HEIKKILA ET AL.

Examiner

Cynthia L Davis

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2-7, 9-13, and 17-18 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 1,8 and 14-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/2/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Claim Objections

2. Claim 1 is objected to because of the following informalities: for the sake of clarity, in lines 3, 4, and 11, "whitening filter" should be changed to "whitening filter system." Also, in line 5, "parallel whitening filters" should be changed to "parallel individual whitening filters." Appropriate correction is required.
3. Claim 8 is objected to because of the following informalities: for the sake of clarity, in line 6, "whitening filter comprising" should be changed to "whitening filter system comprising". Also, "parallel whitening filters" in line 6 should be changed to "parallel individual whitening filters". Also, on page 20, line 4, "whitening filter" should be changed to "whitening filter system". Appropriate correction is required.
4. Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 14 is dependent from claim 7, which contains the exact same limitation as claim 14.

5. Claim 15 is objected to because of the following informalities: for the sake of clarity, in lines 5 and 16, "whitening filter" should be changed to "whitening filter system." Also, in line 6, "said whitening filter" should be changed to "said whitening filter system", and "parallel whitening filters" should be changed to "parallel individual whitening filters." Also, in line 15, "parallel whitening filters" should be changed to "parallel individual whitening filters." Appropriate correction is required.

6. Claim 16 is objected to because of the following informalities: the text in parentheses in line 2 will not be considered as part of the claim. If it is meant to be part of the claim, the parentheses need to be deleted. Appropriate correction is required.

Allowable Subject Matter

7. The following is a statement of reasons for the indication of allowable subject matter. In claim 1, the limitation:

...said whitening filter comprising $N_s N_r$ parallel whitening filters with individual whitening filters W_{jk} , receiving, during each symbol interval I , $N_s N_r$ new signal samples via a signal connection matrix such that a first individual whitening filter receives one of the new samples, a second individual whitening filter receives the same new sample as the first individual whitening filter, and one additional new sample, and such that an n th individual whitening filter receives the same $a-1$ new samples as the first $n-1$ individual whitening filters, plus one additional new sample...

is not present in the prior art.

8. The following is a statement of reasons for the indication of allowable subject matter. In claim 8, the limitation:

...where whitening uses, a whitening filter comprising $N_s N_{rx}$ parallel whitening filters $w(j,k)$, individual whitening filters $w(j,k)$ receiving during each symbol interval i , $N_s N_{rx}$ new signal samples via a signal connection matrix such that a first individual whitening filter receives only one of the new samples, a second individual whitening filter receives the same sample as the first individual whitening filter, and one additional sample, and such that an n th individual whitening filter receives the same $n-1$ samples as the first $n-1$ individual whitening filters, plus one of the remaining samples...

is not present in the prior art.

9. The following is a statement of reasons for the indication of allowable subject matter. In claim 15, the limitation:

...said whitening filter comprising $N_s N_{rx}$ parallel whitening filters $w(j,k)$, individual whitening filters $w(j,k)$ receiving, during each symbol interval I , $N_s N_{rx}$ new signal samples via a signal connection matrix such that a first individual whitening filter receives one of the new samples, a second individual whitening filter receives the same new sample as the first individual whitening filter, and one additional new sample, and such that an n th individual whitening filter receives the same $n-1$ new samples as the first $n-1$ individual whitening filters, plus one additional new sample...

is not present in the prior art.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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12/20/2004

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